

**INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION**



(PTO-1449)

ATTY. DOCKET NO.  
4066 D1/Consilium/DV

SERIAL NO.  
10/084,092

**RECEIVED**  
SEP 20 2002  
Technology Center 2100

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

**U.S. PATENT DOCUMENTS**

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	4,698,766	10/06/87	Entwistle et al.			05/17/85
	4,967,381	10/30/90	Lane et al.			07/06/89
	5,208,765	05/04/93	Turnbull			07/20/90
	5,226,118	07/06/93	Baker et al.			01/29/91
	5,231,585	07/27/93	Kobayashi et al.			06/20/90
	5,420,796	05/30/95	Weling et al.			12/23/93
	5,469,361	11/21/95	Moyne			06/06/94
	5,525,808	06/11/96	Irie et al.			12/20/94
	5,586,039	12/17/96	Hirsch et al.			02/27/95
	5,603,707	02/18/97	Trombetta et al.			11/28/95
	5,664,987	09/09/97	Renteln			09/04/96
	5,812,407	09/22/98	Sato et al.			08/12/97
	5,828,778	10/27/98	Hagi et al.			06/12/96
	5,832,224	11/03/98	Fehskens et al.			06/14/96

**FOREIGN PATENT DOCUMENTS**

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
Snb	61-171147	08/01/86	Japan				X
Snb	6-184434	07/05/94	Japan				X
Snb	0 621 522 A2	10/26/94	Europe			X	
Snb	8-50161	02/20/96	Japan				X
Snb	8-304023	11/22/96	Japan				X

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

Snb	February 1984. "Method and Apparatus of in Situ Measurement and Overlay Error Analysis for Correcting Step and Repeat Lithographic Cameras." <i>IBM Technical Disclosure Bulletin</i> , pp. 4855-4859.
Snb	October 1984. "Method to Characterize the Stability of a Step and Repeat Lithographic System." <i>IBM Technical Disclosure Bulletin</i> , pp. 2857-2860.

EXAMINER

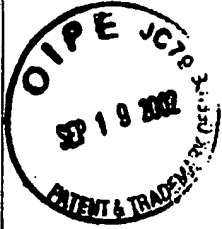
DATE CONSIDERED

Dahl

10/3/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION



(PTO-1449)

ATTY. DOCKET NO.  
4066 D1/Consilium/DV

SERIAL NO.  
10/084,092

RECEIVED  
SEP 20 2002  
Technology Center 2100

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	5,859,964	01/12/99	Wang et al.			10/25/96
	5,863,807	01/26/99	Jang et al.			03/15/96
	5,870,306	02/09/99	Harada			06/13/97
	5,903,455	05/11/99	Sharpe, Jr. et al.			12/12/96
	5,916,016	06/29/99	Bothra			10/23/97
	5,923,553	07/13/99	Yi			10/05/96
	5,930,138	07/27/99	Lin et al.			09/10/97
	5,940,300	08/17/99	Ozaki			05/08/97
	5,960,214	09/28/99	Sharpe, Jr. et al.			12/04/96
	5,963,881	10/05/99	Kahn et al.			10/20/97
	5,982,920	11/09/99	Tobin, Jr. et al.			01/08/97
	6,041,270	03/21/00	Steffan et al.			12/05/97
	6,078,845	06/20/00	Friedman			11/25/96
	6,112,130	08/29/00	Fukuda et al.			10/01/97
	6,148,246	11/14/00	Kawazome			06/10/98

## FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
Snb	0 747 795 A2	12/11/96	Europe			X	
Snb	10-173029	06/26/98	Japan				X
Snb	0 895 145 A1	02/03/99	Europe			X	
Snb	11-126816	05/11/99	Japan				X

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

Snb	Schmid, Hans Albrecht. 1995. "Creating the Architecture of a Manufacturing Framework by Design Patterns." Austin, Texas: OOPSLA.
Snb	Baliga, John. July 1999. "Advanced Process Control: Soon to be a Must." Cahners Semiconductor International. <a href="http://www.semiconductor.net/semiconductor/issues/issues/1999/jul99/docs/feature1.asp">www.semiconductor.net/semiconductor/issues/issues/1999/jul99/docs/feature1.asp</a>

EXAMINER

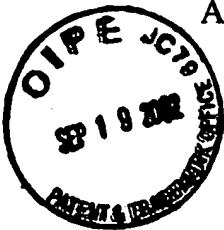
S. mld

DATE CONSIDERED

10/3/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
4066 D1/Consilium/DV

SERIAL NO.  
10/084,092

RECEIVED

SEP 20 2002

APPLICANT

John F. ARACKAPPA et al.

FILING DATE  
February 28, 2002

GROUP  
2121

Technology Center 2100

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	6,175,777	01/16/01	Kim			01/16/98
	6,178,390	01/23/01	Jun			09/08/98
	6,185,324	02/06/01	Ishihara et al.			01/31/95
	6,192,291	02/20/01	Kwon			10/08/98
	6,197,604	03/06/01	Miller et al.			10/01/98
	6,211,094	04/03/01	Jun et al.			08/23/99
	6,226,792	05/01/01	Goiffon et al.			10/14/98
	6,230,069	05/08/01	Campbell et al.			06/26/98
	6,236,903	05/22/01	Kim et al.			09/25/98
	6,240,330	05/29/01	Kurtzberg et al.			05/28/97


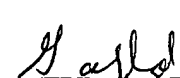
FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
snb	11-135601	05/21/99	Japan				X
snb	WO 00/05759	02/03/00	WO			X	
snb	WO 00/35063	06/15/00	WO			X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

snb	July 5, 2001. "Motorola and Advanced Micro Devices Buy ObjectSpace Catalyst Advanced Process Control Product for Five Wafer Fabs." Semiconductor FABTECH. <a href="http://www.semiconductorfabtech.com/industry.news/9907/20.07.shtml">www.semiconductorfabtech.com/industry.news/9907/20.07.shtml</a>
snb	October 15, 2001. Search Report prepared by the Austrian Patent Office for Singapore Patent Application No. 200004286-1.
snb	Johnson, Bob. June 10, 2002. "Advanced Process Control Key to Moore's Law." Gartner, Inc.
snb	July 9, 2002. International Search Report prepared by the European Patent Office for PCT/US01/24910.
snb	July 29, 2002. International Search Report prepared by the European Patent Office for PCT/US01/27407.
snb	Sonderman, Thomas. 2002. "APC as a Competitive Manufacturing Technology: AMD's Vision for 300mm." AEC/APC.
EXAMINER	DATE CONSIDERED
<i>snb</i>	10/3/02

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b>				ATTY. DOCKET NO. 4066 D1/Consilium/DV		SERIAL NO. 10/084,092	
				APPLICANT John F. ARACKAPARTAMBIL et al.		<b>RECEIVED</b> SEP 20 2002 Technology Center 2100	
				FILING DATE February 28, 2002		GROUP 2121	
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
	6,240,331	05/29/01	Yun			08/18/98	
	6,248,602	06/19/01	Bode et al.			11/01/99	
	6,252,412	06/26/01	Talbot et al.			01/08/99	
	6,263,255	07/17/01	Tan et al.			05/18/98	
	6,292,708	09/18/01	Allen et al.			06/11/98	
	6,298,274	10/02/01	Inoue			09/01/99	
	6,303,395	10/16/01	Nulman			06/01/99	
	6,345,315	02/05/02	Mishra			08/12/98	
	6,366,934	04/02/02	Cheng et al.			06/02/99	
<b>FOREIGN PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
SPU	WO 00/79355 A1	12/28/00	WO			X	
SNB	2001-76982	03/23/01	Japan				X
SD	WO 01/33501 A1	05/10/01	WO			X	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
EXAMINER				DATE CONSIDERED 10/13/05			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION

(PTO-1449)

ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

RECEIVED

JAN 02 2003

Technology Center 2100

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
SMC	5,270,222	12/14/93	Moslehi			12/31/90
SMC	5,375,064	12/20/94	Bollinger			12/02/93
SMC	5,599,423	02/04/97	Parker et al.			06/30/95
SMC	5,844,554	12/01/98	Geller et al.			09/17/96

## FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
SMC	WO 95/34866 ✓	12/21/95	WO			X	
SMC	WO 98/45090 ✓	10/15/98	WO			X	
SMC	EP 0 881 040 A2 ✓	12/02/98	Europe			X	
SMC	WO 99/25520 ✓	05/27/99	WO			X	
SMC	WO 00/54325 ✓	09/14/00	WO			X	
SMC	EP 1 066 925 A2 ✓	01/10/01	Europe			X	
SMC	EP 1 092 505 A2 ✓	04/18/01	Europe			X	

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

SMC	Hu, Albert, Kevin Nguyen, Steve Wong, Xiuhua Zhang, Emanuel Sachs, and Peter Renteln. 1993. "Concurrent Deployment of Run by Run Controller Using SCC Framework." IEEE/SEMI International Semiconductor Manufacturing Science Symposium. pp. 126-132. ✓
SMC	Hu, Albert, He Du, Steve Wong, Peter Renteln, and Emanuel Sachs. 1994. "Application of Run by Run Controller to the Chemical-Mechanical Planarization Process." IEEE/CPMT International Electronics Manufacturing Technology Symposium. pp. 371-378. ✓
SMC	Smith, Taber, Duane Boning, James Moyne, Arnon Hurwitz, and John Curry. June 1996. "Compensating for CMP Pad Wear Using Run by Run Feedback Control." Proceedings of the Thirteenth International VLSI Multilevel Interconnection Conference. pp. 437-439. ✓
SMC	Suzuki, Junichi and Yoshikazu Yamamoto. 1998. "Toward the Interoperable Software Design Models: Quartet of UML, XML, DOM and CORBA." Proceedings IEEE International Software Engineering Standards Symposium. pp. 1-10. ✓
SMC	Klein, Bruce. June 1999. "Application Development: XML Makes Object Models More Useful." Informationweek. pp. 1A-6A. ✓

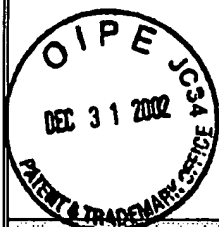
EXAMINER

DATE CONSIDERED

10/3/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

# INFORMATION DISCLOSURE CITATION IN AN APPLICATION



(PTO-1449)

ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
snb	5,889,991	03/30/99	Consolatti et al.			12/06/96
snb	6,183,345 B1	02/06/01	Kamono et al.			03/20/98
snb	6,253,366 B1	06/26/01	Mutschler, III			03/31/99
snb	6,298,470 B1	10/02/01	Breiner et al.			04/15/99

## FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
snb	WO 01/52055 A3	07/19/01	WO			X	
snb	WO 01/57823 A2	08/09/01	WO			X	
snb	EP 1 182 526 A2	02/27/02	Europe			X	
snb	WO 02/17150 A1	02/28/02	WO			X	
snb	WO 02/33737 A2	04/25/02	WO			X	

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

snb	Chemali, Chadi El, James Moyne, Kareemullah Khan, Rock Nadeau, Paul Smith, John Colt, Jonathan Chapple-Sokol, and Tarun Parikh. July/August 2000. "Multizone Uniformity Control of a Chemical Mechanical Polishing Process Utilizing a Pre- and Postmeasurement Strategy." J. Vac. Sci. Technol. A, Vol. 18(4). pp. 1287-1296. American Vacuum Society.
snb	Jensen, Alan, Peter Renteln, Stephen Jew, Chris Raeder, and Patrick Cheung. June 2001. "Empirical-Based Modeling for Control of CMP Removal Uniformity." Solid State Technology, Vol. 44, No. 6, pp. 101-102, 104, 106. Cowan Publ. Corp.: Washington, D.C.
snb	Sarfaty, Moshe, Arulkumar Shanmugasundram, Alexander Schwarm, Joseph Paik, Jimin Zhang, Rong Pan, Martin J. Seamons, Howard Li, Raymond Hung, and Suketu Parikh. April/May 2002. "Advance Process Control Solutions for Semiconductor Manufacturing." IEEE/SEMI Advanced Semiconductor Manufacturing Conference. pp. 101-106.
snb	October 4, 2002. International Search Report from PCT/US01/22833.
snb	October 23, 2002. International Search Report from PCT/US01/27406.
snb	November 7, 2002. International Search Report from PCT/US02/19061.
snb	November 11, 2002. International Search Report from PCT/US02/19117.
snb	November 12, 2002. International Search Report from PCT/US02/19063.

EXAMINER

DATE CONSIDERED

Gald

10/3/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	3,205,485	09/07/65	Noltingk			10/21/60
	3,229,198	01/11/66	Libby			09/28/62
	4,000,458	12/28/76	Miller et al.			08/21/75
	4,302,721	11/24/81	Urbanek et al.			05/15/79
	4,750,141	06/07/88	Judell et al.			11/26/85
	4,757,259	07/12/88	Charpentier			11/05/86
	4,938,600	07/03/90	Into			02/09/89
	5,283,141	02/01/94	Yoon et al.			03/05/92
	5,338,630	08/16/94	Yoon et al.			11/18/93
	5,485,082	01/16/96	Wisspeintner et al.			04/05/90
	5,497,381	03/05/96	O'Donoghue et al.			06/01/95
	5,511,005	04/23/96	Abbe et al.			02/16/94
	5,519,605	05/21/96	Cawfield			10/24/94
	5,526,293	06/11/96	Mozumder et al.			12/17/93
	5,541,510	06/30/96	Danielson			04/06/95
	5,546,312	08/13/96	Mozumder et al.			02/24/94
	5,553,195	09/03/96	Meijer			09/29/94
	5,602,492	02/11/97	Cresswell et al.			04/28/94
	5,617,023	04/01/97	Skalski			02/02/95
	5,627,083	05/06/97	Tounai			05/12/95
	5,642,296	06/24/97	Saxena			07/29/93
	5,646,870	07/08/97	Krivokapic et al.			02/13/95
	5,649,169	07/15/97	Berezin et al.			06/20/95
	5,654,903	08/05/97	Reitman et al.			11/07/95
	5,663,797	09/02/97	Sandhu			05/16/96
	5,665,199	09/09/97	Sahota et al.			06/23/95
	5,666,297	09/09/97	Britt et al.			05/13/94

RECEIVED

APR 28 2003

Technology Center 2100

all  
ck  
Srb

EXAMINER

*Harold*

DATE CONSIDERED

*10/3/05*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	5,667,424	09/16/97	Pan			09/25/96
	5,674,787	10/07/97	Zhao et al.			01/16/96
	5,719,796	02/17/98	Chen			12/04/95
	5,735,055	04/07/98	Hochbein et al.			04/23/96
	5,761,064	06/02/98	La et al.			10/06/95
	5,777,901	07/07/98	Berezin et al.			09/29/95
	5,787,021	07/28/98	Samaha			12/18/95
	5,787,269	07/28/98	Hyodo			09/19/95
	5,825,913	10/20/98	Rostami et al.			07/18/95
	5,857,258	01/12/99	Penzes et al.			05/12/94
	5,910,846	06/08/99	Sandhu			08/19/97
	5,943,237	08/24/99	Van Boxem			10/17/97
	5,960,185	09/28/99	Nguyen			06/24/96
	5,961,369	10/05/99	Bartels et al.			06/04/98
	5,978,751	11/02/99	Pence et al.			02/25/97
	6,017,771	01/25/00	Yang et al.			04/27/98
	6,036,349	03/14/00	Gombar			07/26/96
	6,064,759	05/16/00	Buckley et al.			11/06/97
	6,072,313	06/06/00	Li et al.			06/17/97
	6,097,887	08/01/00	Hardikar et al.			10/27/97
	6,108,092	08/22/00	Sandhu			06/08/99
	6,127,263	10/03/00	Parikh			07/10/98
	6,136,163	10/24/00	Cheung et al.			03/05/99
	6,141,660	10/31/00	Bach et al.			07/16/98
	6,143,646	11/07/00	Wetzel			06/03/97
	6,148,099	11/14/00	Lee et al.			07/03/97
	6,148,239	11/14/00	Funk et al.			12/12/97

EXAMINER

*Gauld*

DATE CONSIDERED

*10/3/05*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	6,159,075	12/12/00	Zhang			10/13/99
	6,159,644	12/12/00	Satoh et al.			03/06/96
	6,161,054	12/12/00	Rosenthal et al.			09/17/98
	6,169,931	01/02/01	Runnels			06/29/98
	6,172,756	01/09/01	Chalmers et al.			12/11/98
	6,173,240	01/09/01	Sepulveda et al.			11/02/98
	6,191,864	02/20/01	Sandhu			02/29/00
	6,204,165	03/20/01	Ghoshal			06/24/99
	6,210,983	04/03/01	Atchison et al.			06/15/99
	6,214,734	04/10/01	Bothra et al.			11/20/98
	6,217,412	04/17/01	Campbell et al.			08/11/99
	6,222,936	04/24/01	Phan et al.			09/13/99
	2001/0001755	05/24/01	Sandhu et al.			12/29/00
	2001/0003084	06/07/01	Finarov			12/04/00
	6,246,972	06/12/01	Klimasauskas			05/27/99
	6,276,989	08/21/01	Campbell et al.			08/11/99
	6,280,289	08/28/01	Wiswesser et al.			11/02/98
	6,284,622	09/04/01	Campbell et al.			10/25/99
	6,287,879	09/11/01	Gonzales et al.			08/11/99
	6,290,572	09/18/01	Hofmann			03/23/00
	6,304,999	10/16/01	Toprac et al.			10/23/00
	2001/0030366	10/18/01	Nakano et al.			03/07/01
	6,307,628	10/23/01	Lu et al.			08/18/00
	6,314,379	11/06/01	Hu et al.			12/04/97
	2001/0039462	11/08/01	Mendez et al.			04/02/01
	6,320,655	11/20/01	Matsushita et al.			03/15/00

RECEIVED

APR 28 2003

Technology Center 2100

EXAMINER

*Handwritten signature*

DATE CONSIDERED

*10/3/05*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	2001/0042690	11/22/01	Talieh			12/14/00
	6,324,481	11/27/01	Atchison et al.			06/15/99
	6,334,807	01/01/02	Lebel et al.			04/30/99
	6,336,841	01/08/02	Chang			03/29/01
	2002/0032499	03/14/02	Wilson et al.			05/04/01
	6,360,133	03/19/02	Campbell et al.			06/17/99
	6,360,184	03/19/02	Jacquez			03/26/97
	6,368,883	04/09/02	Bode et al.			08/10/99
	6,368,884	04/09/02	Goodwin et al.			04/13/00
	6,379,980	04/30/02	Toprac			07/26/00
	6,388,253	05/14/02	Su			11/02/00
	2002/0058460	05/16/02	Lee et al.			09/14/01
	6,395,152	05/28/02	Wang			07/02/99
	6,397,114	05/28/02	Eryurek et al.			05/03/99
	6,405,096	06/11/02	Toprac et al.			08/10/99
	6,405,144	06/11/02	Toprac et al.			01/18/00
	2002/0070126	06/13/02	Sato et al.			09/19/01
	2002/0081951	06/27/02	Boyd et al.			02/20/02
	2002/0089676	07/11/02	Pecen et al.			04/26/00
	2002/0102853	08/01/02	Li et al.			12/20/01
	2002/0107599	08/08/02	Patel et al.			01/25/01
	6,435,952	08/20/02	Boyd et al.			06/30/00
	6,438,438	08/20/02	Takagi et al.			01/02/98
	2002/0113039	08/22/02	Mok et al.			02/16/01
	6,440,295	08/27/02	Wang			02/04/00
	2002/0127950	09/12/02	Hirose et al.			03/08/01
	6,455,937	09/24/02	Cunningham			03/17/99

RECEIVED

APR 28 2003

Technology Center 2100

EXAMINER

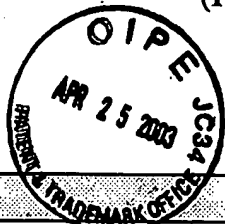
*Gould*

DATE CONSIDERED

*10/3/03*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	2002/0149359	10/17/02	Crouzen et al.			08/18/01
	6,479,902	11/12/02	Lopatin et al.			06/29/00
	6,479,990	11/12/02	Mednikov et al.			06/18/01
	2002/0185658	12/12/02	Inoue et al.			06/14/01
	2002/0193902	12/19/02	Shanmugasundram et al.			06/18/02
	2002/0197745	12/26/02	Shanmugasundram et al.			08/31/01
	2002/0197934	12/26/02	Paik			11/30/01
	2002/0199082	12/26/02	Shanmugasundram et al.			06/18/02
	6,503,839	01/07/03	Gonzales et al.			07/03/01
	2003/0020909	01/30/03	Adams et al.			04/09/01
	2003/0020928	01/30/03	Ritzdorf et al.			07/09/01
	6,517,413	02/11/03	Hu et al.			10/25/00

RECEIVED

APR 28 2003

Technology Center 2100

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
	61-66104	04/04/86	Japan			X	
	3-202710	09/04/91	Japan			X	
	8-23166	01/23/96	Japan			X	
	9-246547	09/19/97	Japan			X	
	WO 98/05066	02/05/98	WIPO			X	
	10-34522	02/10/98	Japan			X	
	0 869 652	10/07/98	Europe			X	
	WO 99/09371	02/25/99	WIPO			X	
	0 910 123	04/21/99	Europe			X	
	0 932 194	07/28/99	Europe			X	
	WO 00/00874	01/06/00	WIPO			X	
	2000-183001	06/30/00	Japan			X	


EXAMINER

DATE CONSIDERED

*Handwritten signature*

10/3/05


EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b> (PTO-1449)				<b>ATTY. DOCKET NO.</b> 004066 USA D01/Consilium/Consilium		<b>SERIAL NO.</b> 10/084,092			
				<b>APPLICANT</b> John F. ARACKAPARAMBIL et al.					
				<b>FILING DATE</b> February 28, 2002		<b>GROUP</b> 2121			
<b>FOREIGN PATENT DOCUMENTS</b>									
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation			
						Yes	No		
	1 071 128	01/24/01	Europe			X			
	WO 01/18623	03/15/01	WIPO			X			
	WO 01/25865	04/12/01	WIPO			X			
	434103	05/16/01	Taiwan			X			
	436383	05/28/01	Taiwan			X			
	455938	09/21/01	Taiwan			X			
	455976	09/21/01	Taiwan			X			
	2001-284299	10/12/01	Japan			X			
	2001-305108	10/31/01	Japan			X			
	2002-9030	01/11/02	Japan			X			
	WO 02/074491	09/26/02	WIPO			X			
	2002-343754	11/29/02	Japan			X			
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>									
	Ostanin, Yu.Ya. October 1981. "Optimization of Thickness Inspection of Electrically Conductive Single-Layer Coatings with Laid-on Eddy-Current Transducers (Abstract)." <i>Defektoskopiya</i> , vol. 17, no. 10, pp. 45-52. Moscow, USSR.								
	February 1984. "Substrate Screening Process." <i>IBM Technical Disclosure Bulletin</i> , pp. 4824-4825.								
	Herrmann, D. 1988. "Temperature Errors and Ways of Elimination for Contactless Measurement of Shaft Vibrations (Abstract)." <i>Technisches Messen</i> <sup>TM</sup> , vol. 55, no. 1, pp. 27-30. West Germany.								
	Lin, Kuang-Kuo and Costas J. Spanos. November 1990. "Statistical Equipment Modeling for VLSI Manufacturing: An Application for LPCVD." <i>IEEE Transactions on Semiconductor Manufacturing</i> , v. 3, n. 4, pp. 216-229.								
	Chang, Norman H. and Costas J. Spanos. February 1991. "Continuous Equipment Diagnosis Using Evidence Integration: An LPCVD Application." <i>IEEE Transactions on Semiconductor Manufacturing</i> , v. 4, n. 1, pp. 43-51.								
	Larrabee, G. B. May 1991. "The Intelligent Microelectronics Factory of the Future (Abstract)." <i>IEEE/SEMI International Semiconductor Manufacturing Science Symposium</i> , pp. 30-34. Burlingame, CA.								
	Burke, Peter A. June 1991. "Semi-Empirical Modelling of SiO <sub>2</sub> Chemical-Mechanical Polishing Planarization." <i>VMIC Conference, 1991 IEEE</i> , pp. 379-384. IEEE.								
<b>EXAMINER</b> 				<b>DATE CONSIDERED</b> 10/3/05					

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<p align="center"><b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b></p> <p align="center"><b>O I P E</b> APR 25 2003 PATENT &amp; TRADEMARK OFFICE</p>	<p>ATTY. DOCKET NO. 004066 USA D01/Consilium/Consilium</p>	<p>SERIAL NO. 10/084,092 <b>RECEIVED</b> APR 28 2003 Technology Center 2100</p>
	<p>APPLICANT John F. ARACKAPARAMBIL et al.</p>	
	<p>FILING DATE February 28, 2002</p>	<p>GROUP 2121</p>
<p align="center"><b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b></p>		
	<p>May 1992. "Laser Ablation Endpoint Detector." <i>IBM Technical Disclosure Bulletin</i>, pp. 333-334.</p>	
	<p>Spanos, Costas J., Hai-Fang Guo, Alan Miller, and Joanne Levine-Parrill. November 1992. "Real-Time Statistical Process Control Using Tool Data." <i>IEEE Transactions on Semiconductor Manufacturing</i>, v. 5, n. 4, pp. 308-318.</p>	
	<p>February 1993. "Electroless Plating Scheme to Hermetically Seal Copper Features." <i>IBM Technical Disclosure Bulletin</i>, pp. 405-406.</p>	
	<p>Scarr, J. M. and J. K. Zelisse. April 1993. "New Topology for Thickness Monitoring Eddy Current Sensors (Abstract)." <i>Proceedings of the 36th Annual Technical Conference</i>, Dallas, Texas.</p>	
	<p>Matsuyama, Akira and Jessi Niu. 1993. "A State-of-the-Art Automation System of an ASIC Wafer Fab in Japan." <i>IEEE/SEMI International Semiconductor Manufacturing Science Symposium</i>, pp. 42-47.</p>	
	<p>Yeh, C. Eugene, John C. Cheng, and Kwan Wong. 1993. "Implementation Challenges of a Feedback Control System for Wafer Fabrication." <i>IEEE/CHMT International Electronics Manufacturing Technology Symposium</i>, pp. 438-442.</p>	
	<p>Kurtzberg, Jerome M. and Menachem Levanoni. January 1994. "ABC: A Better Control for Manufacturing." <i>IBM Journal of Research and Development</i>, v. 38, n. 1, pp. 11-30.</p>	
	<p>Mozumder, Purnendu K. and Gabriel G. Barra. February 1994. "Statistical Feedback Control of a Plasma Etch Process." <i>IEEE Transactions on Semiconductor Manufacturing</i>, v. 7, n. 1, pp. 1-11.</p>	
	<p>Muller-Heinzerling, Thomas, Ulrich Neu, Hans Georg Nurnberg, and Wolfgang May. March 1994. "Recipe-Controlled Operation of Batch Processes with Batch X." <i>ATP Automatisierungstechnische Praxis</i>, vol. 36, no. 3, pp. 43-51.</p>	
	<p>Stoddard, K., P. Crouch, M. Kozicki, and K. Tsakalis. June-July 1994. "Application of Feedforward and Adaptive Feedback Control to Semiconductor Device Manufacturing (Abstract)." <i>Proceedings of 1994 American Control Conference - ACC '94</i>, vol. 1, pp. 892-896. Baltimore, Maryland.</p>	
	<p>Schaper, C. D., M. M. Moslehi, K. C. Saraswat, and T. Kailath. November 1994. "Modeling, Identification, and Control of Rapid Thermal Processing Systems (Abstract)." <i>Journal of the Electrochemical Society</i>, vol. 141, no. 11, pp. 3200-3209.</p>	
	<p>Tao, K. M., R. L. Kosut, M. Ekblad, and G. Aral. December 1994. "Feedforward Learning Applied to RTP of Semiconductor Wafers (Abstract)." <i>Proceedings of the 33rd IEEE Conference on Decision and Control</i>, vol. 1, pp. 67-72. Lake Buena Vista, Florida.</p>	
	<p>Hu, Albert, He Du, Steve Wong, Peter Renteln, and Emmanuel Sachs. 1994. "Application of Run by Run Controller to the Chemical-Mechanical Planarization Process." <i>IEEE/CPMT International Electronics Manufacturing Technology Symposium</i>, pp. 371-378.</p>	
	<p>Spanos, C. J., S. Leang, S.-Y. Ma, J. Thomson, B. Bombay, and X. Niu. May 1995. "A Multistep Supervisory Controller for Photolithographic Operations (Abstract)." <i>Proceedings of the Symposium on Process Control, Diagnostics, and Modeling in Semiconductor Manufacturing</i>, pp. 3-17.</p>	
	<p>Leang, Sovarong, Shang-Yi Ma, John Thomson, Bart John Bombay, and Costas J. Spanos. May 1996. "A Control System for Photolithographic Sequences." <i>IEEE Transactions on Semiconductor Manufacturing</i>, vol. 9, no. 2.</p>	
<p>EXAMINER</p> <p align="center"><i>David</i></p>	<p>DATE CONSIDERED</p> <p align="center"><i>10/3/05</i></p>	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<p align="center"><b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b></p> 	<p>ATTY. DOCKET NO. 004066 USA D01/Consilium/Consilium</p>	<p>SERIAL NO. 10/084,092</p> <p align="center"><b>RECEIVED</b></p> <p align="center">APR 28 2003</p>
	<p>APPLICANT John F. ARACKAPARAMBIL et al. Technology Center 2100</p>	
	<p>FILING DATE February 28, 2002</p>	<p>GROUP 2121</p>
<p align="center"><b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b></p>		
<p><i>(This column is crossed out with a large X)</i></p>	<p>Boning, Duane S., William P. Moyne, Taber H. Smith, James Moyne, Ronald Telfeyan, Arnon Hurwitz, Scott Shellman, and John Taylor. October 1996. "Run by Run Control of Chemical-Mechanical Polishing." <i>IEEE Transactions on Components, Packaging, and Manufacturing Technology—Part C</i>, vol. 19, no. 4, pp. 307-314.</p>	
	<p>Zhe, Ning, J. R. Moyne, T. Smith, D. Boning, E. Del Castillo, Yeh Jinn-Yi, and Hurwitz. November 1996. "A Comparative Analysis of Run-to-Run Control Algorithms in Semiconductor Manufacturing Industry (Abstract)." <i>IEEE/SEMI 1996 Advanced Semiconductor Manufacturing Conference Workshop</i>, pp. 375-381.</p>	
	<p>Yasuda, M., T. Osaka, and M. Ikeda. December 1996. "Feedforward Control of a Vibration Isolation System for Disturbance Suppression (Abstract)." <i>Proceeding of the 35<sup>th</sup> IEEE Conference on Decision and Control</i>, vol. 2, pp. 1229-1233. Kobe, Japan.</p>	
	<p>Fan, Jr-Min, Ruey-Shan Guo, Shi-Chung Chang, and Kian-Huei Lee. 1996. "Abnormal Trend Detection of Sequence-Disordered Data Using EWMA Method." <i>IEEE/SEMI Advanced Semiconductor Manufacturing Conference</i>, pp. 169-174.</p>	
	<p>Smith, Taber and Duane Boning. 1996. "A Self-Tuning EWMA Controller Utilizing Artificial Neural Network Function Approximation Techniques." <i>IEEE/CPMT International Electronics Manufacturing Technology Symposium</i>, pp. 355-363.</p>	
	<p>Guo, Ruey-Shan, Li-Shia Huang, Argon Chen, and Jin-Jung Chen. October 1997. "A Cost-Effective Methodology for a Run-by-Run EWMA Controller." <i>6<sup>th</sup> International Symposium on Semiconductor Manufacturing</i>, pp. 61-64.</p>	
	<p>Mullins, J. A., W. J. Campbell, and A. D. Stock. October 1997. "An Evaluation of Model Predictive Control in Run-to-Run Processing in Semiconductor Manufacturing (Abstract)." <i>Proceedings of the SPIE – The International Society for Optical Engineering Conference</i>, vol. 3213, pp. 182-189.</p>	
	<p>Reitman, E. A., D. J. Friedman, and E. R. Lory. November 1997. "Pre-Production Results Demonstrating Multiple-System Models for Yield Analysis (Abstract)." <i>IEEE Transactions on Semiconductor Manufacturing</i>, vol. 10, no. 4, pp. 469-481.</p>	
	<p>Durham, Jim and Myriam Roussel. 1997. "A Statistical Method for Correlating In-Line Defectivity to Probe Yield." <i>IEEE/SEMI Advanced Semiconductor Manufacturing Conference</i>, pp. 76-77.</p>	
	<p>Shindo, Wataru, Eric H. Wang, Ram Akella, and Andrzej J. Strojwas. 1997. "Excursion Detection and Source Isolation in Defect Inspection and Classification." <i>2<sup>nd</sup> International Workshop on Statistical Metrology</i>, pp. 90-93.</p>	
<p><i>(This column is crossed out with a large X)</i></p>	<p>July 1998. "Active Controller: Utilizing Active Databases for Implementing Multistep Control of Semiconductor Manufacturing (Abstract)." <i>IEEE Transactions on Components, Packaging and Manufacturing Technology—Part C</i>, vol. 21, no. 3, pp. 217-224.</p>	
	<p>Fang, S. J., A. Barda, T. Janecko, W. Little, D. Outley, G. Hempel, S. Joshi, B. Morrison, G. B. Shinn, and M. Birang. 1998. "Control of Dielectric Chemical Mechanical Polishing (CMP) Using and Interferometry Based Endpoint Sensor." <i>International Proceedings of the IEEE Interconnect Technology Conference</i>, pp. 76-78.</p>	
<p>EXAMINER <i>Garold</i></p>	<p>DATE CONSIDERED <i>10/3/05</i></p>	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

RECEIVED

APR 28 2003

APPLICANT  
John F. ARACKAPARAMBIL et al Technology Center 2100

FILING DATE  
February 28, 2002

GROUP  
2121

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- Ouma, Dennis, Duane Boning, James Chung, Greg Shinn, Leif Olsen, and John Clark. 1998. "An Integrated Characterization and Modeling Methodology for CMP Dielectric Planarization." *Proceedings of the IEEE 1998 International Interconnect Technology Conference*, pp. 67-69.
- Boning, Duane S., Jerry Stefani, and Stephanie W. Butler. February 1999. "Statistical Methods for Semiconductor Manufacturing." *Encyclopedia of Electrical Engineering*, J. G. Webster, Ed.
- McIntosh, John. March 1999. "Using CD-SEM Metrology in the Manufacture of Semiconductors (Abstract)." *JOM*, vol. 51, no. 3, pp. 38-39.
- Pan, J. Tony, Ping Li, Kapila Wijekoon, Stan Tsai, and Fritz Redeker. May 1999. "Copper CMP Integration and Time Dependent Pattern Effect." *IEEE 1999 International Interconnect Technology Conference*, pp. 164-166.
- Meckl, P. H. and K. Umemoto. August 1999. "Achieving Fast Motions in Semiconductor Manufacturing Machinery (Abstract)." *Proceedings of the 1999 IEEE International Conference on Control Applications*, vol. 1, pp. 725-729. Kohala Coast, HI.
- Khan, K., C. El Chemali, J. Moyné, J. Chapple-Sokol, R. Nadeau, P. Smith, C., and T. Parikh. October 1999. "Yield Improvement at the Contact Process Through Run-to-Run Control (Abstract)." *24<sup>th</sup> IEEE/CPMT Electronics Manufacturing Technology Symposium*, pp. 258-263.
- Ruegsegger, Steven, Aaron Wagner, James S. Freudenberg, and Dennis S. Grimard. November 1999. "Feedforward Control for Reduced Run-to-Run Variation in Microelectronics Manufacturing." *IEEE Transactions on Semiconductor Manufacturing*, vol. 12, no. 4.
- November 1999. "How to Use EWMA to Achieve SPC and EPC Control." *International Symposium on NDT Contribution to the Infrastructure Safety Systems*, Tores, Brazil.  
<<http://www.ndt.net/abstract/ndtiss99/data/35.htm>>
- Edgar, T. F., W. J. Campbell, and C. Bode. December 1999. "Model-Based Control in Microelectronics Manufacturing." *Proceedings of the 38<sup>th</sup> IEEE Conference on Decision and Control*, Phoenix, Arizona, vol. 4, pp. 4185-4191.
- Meckl, P. H. and K. Umemoto. April 2000. "Achieving Fast Motions by Using Shaped Reference Inputs [Semiconductor Manufacturing Machine] (Abstract)." *NEC Research and Development*, vol. 41, no. 2, pp. 232-237.
- Oechsner, R., T. Tschaftary, S. Sommer, L. Pfitzner, H. Ryssel, H. Gerath, C. Baier, and M. Hafner. September 2000. "Feed-forward Control for a Lithography/Etch Sequence (Abstract)." *Proceedings of the SPIE - The International Society for Optical Engineering Conference*, vol. 4182, pp. 31-39.
- Cheung, Robin. October 18, 2000. "Copper Interconnect Technology." *AVS/CMP User Group Meeting*, Santa Clara, CA.
- Edgar, Thomas F., Stephanie W. Butler, W. Jarrett Campbell, Carlos Pfeiffer, Christopher Bode, Sung Bo Hwang, K. S. Balakrishnan, and J. Hahn. November 2000. "Automatic Control in Microelectronics Manufacturing: Practices, Challenges, and Possibilities (Abstract)." *Automatica*, v. 36, n. 11.

EXAMINER

*Sadl*

DATE CONSIDERED

*10/3/05*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)

ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

RECEIVED

APPLICANT  
John F. ARACKAPARAMBIL et al.

APR 28 2003

FILING DATE  
February 28, 2002

GROUP  
2121

Technology Center 210

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

Khan, S., M. Musavi, and H. Ressom. November 2000. "Critical Dimension Control in Semiconductor Manufacturing (Abstract)." *ANNIE 2000. Smart Engineering Systems Design Conference*, pp. 995-1000. St. Louis, Missouri.

ACM Research Inc. 2000. "Advanced Copper Metallization for 0.13 to 0.05  $\mu\text{m}$  & Beyond." <http://acmrc.com/press/ACM-ECP-brochure.pdf>

Ravid, Avi, Avner Sharon, Amit Weingarten, Vladimir Machavariani, and David Scheiner. 2000. "Copper CMP Planarity Control Using ITM." *IEEE/SEMI Advanced Semiconductor Manufacturing Conference*, pp. 437-443.

Chen, Argon and Ruey-Shan Guo. February 2001. "Age-Based Double EWMA Controller and Its Application to CMP Processes." *IEEE Transactions on Semiconductor Manufacturing*, vol. 14, no. 1, pp. 11-19.

Tobin, K. W., T. P. Karnowski, L. F. Arrowood, and F. Lakhani. April 2001. "Field Test Results of an Automated Image Retrieval System (Abstract)." *Advanced Semiconductor Manufacturing Conference, 2001 IEEE/SEMI*, Munich, Germany.

Tan, K. K., H. F. Dou, and K. Z. Tang. May-June 2001. "Precision Motion Control System for Ultra-Precision Semiconductor and Electronic Components Manufacturing (Abstract)." *51<sup>st</sup> Electronic Components and Technology Conference 2001. Proceedings*, pp. 1372-1379. Orlando, Florida.

Heuberger, U. September 2001. "Coating Thickness Measurement with Dual-Function Eddy-Current & Magnetic Inductance Instrument (Abstract)." *Galvanotechnik*, vol. 92, no. 9, pp. 2354-2366+IV.

Wang, LiRen and Hefin Rowlands. 2001. "A Novel NN-Fuzzy-SPC Feedback Control System." *8<sup>th</sup> IEEE International Conference on Emerging Technologies and Factory Automation*, pp. 417-423.

Moyne, J., V. Solakhan, A. Yershov, M. Anderson, and D. Mockler-Hebert. April-May 2002. "Development and Deployment of a Multi-Component Advanced Process Control System for an Epitaxy Tool (Abstract)." *2002 IEEE Advanced Semiconductor Manufacturing Conference and Workshop*, pp. 125-130.

Sarfaty, M., A. Shanmugasundram, A. Schwarm, J. Paik, Jimin Zhang, Rong Pan, M. J. Seamons, H. Li, R. Hung, and S. Parikh. April-May 2002. "Advance Process Control Solutions for Semiconductor Manufacturing (Abstract)." *13<sup>th</sup> Annual IEEE/SEMI Advanced Semiconductor Manufacturing Conference. Advancing the Science and Technology of Semiconductor Manufacturing. ASMC 2002*, pp. 101-106. Boston, MA.

Campbell, W. J., S. K. Firth, A. J. Toprac, and T. F. Edgar. May 2002. "A Comparison of Run-to-Run Control Algorithms (Abstract)." *Proceedings of 2002 American Control Conference*, vol. 3, pp. 2150-2155.

Good, Richard and S. Joe Qin. May 2002. "Stability Analysis of Double EWMA Run-to-Run Control with Metrology Delay." *IEEE/CPMT International Electronics Manufacturing Technology Symposium*, pp. 355-363.

EXAMINER


*Garold*

DATE CONSIDERED

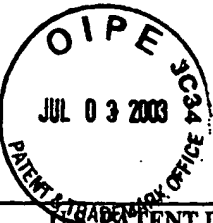
10/3/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



<p align="center"><b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b></p> 	<p>ATTY. DOCKET NO. 004066 USA D01/Consilium/Consilium</p>	<p>SERIAL NO. 10/084,092 <b>RECEIVED</b> APR 28 2003</p>
	<p>APPLICANT John F. ARACKAPARAMBIL et al.</p>	<p>Technology Center 2100</p>
	<p>FILING DATE February 28, 2002</p>	<p>GROUP 2121</p>
<p align="center"><b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b></p>		
	<p>Smith, Stewart, Anthony J. Walton, Alan W. S. Ross, Georg K. H. Bodammer, and J. T. M. Stevenson. May 2002. "Evaluation of Sheet Resistance and Electrical Linewidth Measurement Techniques for Copper Damascene Interconnect." <i>IEEE Transactions on Semiconductor Manufacturing</i>, vol. 15, no. 2, pp. 214-222.</p>	
	<p>Itabashi, Takeyuki, Hiroshi Nakano, and Haruo Akahoshi. June 2002. "Electroless Deposited CoWB for Copper Diffusion Barrier Metal." <i>IEEE International Interconnect Technology Conference</i>, pp. 285-287.</p>	
	<p>ACM Research, Inc. 2002. "ACM Ultra ECP® System: Electro-Copper Plating (ECP) Deposition." <a href="http://www.acmrc.com/ecp.html">www.acmrc.com/ecp.html</a></p>	
	<p>Applied Materials, Inc. 2002. "Applied Materials: Information for Everyone: Copper Electrochemical Plating." <a href="http://www.appliedmaterials.com/products/copper_electrochemical_plating.html">www.appliedmaterials.com/products/copper_electrochemical_plating.html</a></p>	
	<p>KLA-Tencor Corporation. 2002. "KLA Tencor: Press Release: KLA-Tencor Introduces First Production-Worthy Copper CMP In-Situ Film Thickness and End-point Control System: Multi-Million Dollar Order Shipped to Major CMP Tool Manufacturer." <a href="http://www.kla-tencor.com/news_events/press_releases/press_releases2001/984086002.html">www.kla-tencor.com/news_events/press_releases/press_releases2001/984086002.html</a></p>	
	<p>Takahashi, Shingo, Kaori Tai, Hiizu Ohtori, Naoki Komai, Yuji Segawa, Hiroshi Horikoshi, Zenya Yasuda, Hiroshi Yamada, Masao Ishihara, and Takeshi Nogami. 2002. "Fragile Porous Low-k/Copper Integration by Using Electro-Chemical Polishing." <i>2002 Symposium on VLSI Technology Digest of Technical Papers</i>, pp. 32-33.</p>	
	<p>Cunningham, James A. 2003. "Using Electrochemistry to Improve Copper Interconnects." &lt;<a href="http://www.e-insite.net/semiconductor/index.asp?layout=article&amp;articleid=CA47465">http://www.e-insite.net/semiconductor/index.asp?layout=article&amp;articleid=CA47465</a>&gt;</p>	
	<p>March 25, 2003. International Search Report for PCT/US02/24859 prepared by the European Patent Office.</p>	
	<p>Adams, Bret W., Bogdan Swedek, Rajeev Bajaj, Fritz Redeker, Manush Birang, and Gregory Amico. "Full-Wafer Endpoint Detection Improves Process Control in Copper CMP." <i>Semiconductor Fabtech</i> - 12<sup>th</sup> Edition. Applied Materials, Inc., Santa Clara, CA.</p>	
	<p>Berman, Mike, Thomas Bibby, and Alan Smith. "Review of In Situ &amp; In-line Detection for CMP Applications." <i>Semiconductor Fabtech</i>, 8<sup>th</sup> Edition, pp. 267-274.</p>	
	<p>"Semiconductor Manufacturing: An Overview." &lt;<a href="http://users.ece.gatech.edu/~gmay/overview.html">http://users.ece.gatech.edu/~gmay/overview.html</a>&gt;</p>	
<p>EXAMINER</p>	<p><i>B. m. l.</i></p>	<p>DATE CONSIDERED 10/3/05</p>

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b>				ATTY. DOCKET NO. 004066 USA D01/Consilium/Consilium		SERIAL NO. 10/084,092 <b>RECEIVED</b> JUL 07 2003 Technology Center 2100	
				APPLICANT John F. ARACKAPARAMBIL et al.			
FILING DATE February 28, 2002				GROUP 2121			
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
	3,767,900	10/23/73	Chao et al.			06/23/71	
	3,920,965	11/18/75	Sohrwardy			03/04/74	
	4,368,510	01/11/83	Anderson			10/20/80	
	4,616,308	10/07/86	Morshedi et al.			12/02/85	
	4,663,703	05/05/87	Axelby et al.			10/02/85	
	5,347,446	09/13/94	Iino et al.			02/10/92	
	5,519,605	05/21/96	Cawfield			10/24/94	
	6,128,016	10/03/00	Coelho et al.			12/20/96	
	6,219,711	04/17/01	Chari			10/01/97	
	6,249,712	06/19/01	Boiquaye			09/25/96	
	6,278,899	08/21/01	Piche et al.			10/06/98	
	2001/0039462	11/08/01	Mendez et al.			04/02/01	
	2001/0040997	11/15/01	Tsap et al.			05/15/01	
	2002/0128805	09/12/02	Goldman et al.			12/26/00	
<b>FOREIGN PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
snb	EP 1 067 757 /	01/10/01	Europe			X	
snb	WO 01/33277 /	05/10/01	WO			X	
snb	WO 02/31613 A2	04/18/02	WO			X	
snb	WO 02/31613 A3	04/18/02	WO			X	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
snb	Levine, Martin D. 1985. <i>Vision in Man and Machine</i> . New York: McGraw-Hill, Inc. pp. ix-xii, 1-58.						
snb	Pilu, Maurizio. September 2001. "Undoing Page Curl Distortion Using Applicable Surfaces." <i>IEEE International Conference on Image Processing</i> . Thessalonica, Greece.						
snb	23 May 2003. Written Opinion for PCT/US01/24910.						
EXAMINER <i>Sand</i>				DATE CONSIDERED 10/3/05			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



SHEET 1 OF 1

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/ConsiliumSERIAL NO.  
10/084,092

RECEIVED

OCT 10 2003

APPLICANT  
John F. ARACKAPARAMBIL et al.

Technology Center 2100

FILING DATE  
February 28, 2002GROUP  
2121

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	5,901,313	05/04/99	Wolf et al.			09/02/97
	6,002,989	12/14/99	Shiba et al.			04/01/97
	6,094,688	07/25/00	Mellen-Garnett et al.			03/12/98
	6,340,602	01/22/02	Johnson et al.			02/12/01
	6,345,288	02/05/02	Reed et al.			05/15/00
	6,368,879	04/09/02	Toprac			09/22/99
	US-2002/0107604	08/08/02	Riley et al.			12/06/00
	6,470,230	10/22/02	Toprac et al.			01/04/00
	6,482,660	11/19/02	Conchieri et al.			03/19/01
	6,567,717	05/20/03	Krivokapic et al.			01/19/00

all  
checked  
4/6

## FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
snb	WO 99/59200	11/18/99	WIPO			X	
snb	WO 01/52319	07/19/01	WIPO			X	

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

snb	Williams, Randy, Dadi Gudmundsson, Kevin Monahan, Raman Nurani, Meryl Stoller and J. George Shanthikumar. October 1999. "Optimized Sample Planning for Wafer Defect Inspection," <i>Semiconductor Manufacturing Conference Proceedings, 1999 IEEE International Symposium on Santa Clara, CA</i> . Piscataway, NJ. pp. 43 - 46.
snb	23 July 2003. Invitation to Pay Additional Fees and Communication Relating to the Results of the Partial International Search for PCT/US02/19116.
snb	01 August 2003. Written Opinion for PCT/US01/27406.
snb	20 August 2003. Written Opinion for PCT/US01/22833.


EXAMINER

H. A. L.

DATE CONSIDERED

10/3/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b>				ATTY. DOCKET NO. 004066 USA D01/Consilium/Consilium		SERIAL NO. 10/084 092 <b>RECEIVED</b> DEC 19 2003 Technology Center 2100	
				APPLICANT John F. ARACKAPARAMBIL et al.		FILING DATE February 28, 2002	
				GROUP 2121			
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
	4,207,520	06/10/80	Flora et al.			04/06/78	
	4,209,744	06/24/80	Gerasimov et al.			03/27/78	
	4,609,870	09/02/86	Lale et al.			09/13/84	
	4,755,753	07/05/88	Chern			07/23/86	
	5,427,878	06/27/95	Corliss			05/16/94	
	5,534,289	07/09/96	Bilder et al.			01/03/95	
	5,867,389	02/02/99	Hamada et al.			11/26/96	
	6,041,263	03/21/00	Boston et al.			10/01/97	
	6,077,412	06/20/00	Ting et al.			10/30/98	
	6,271,670	08/07/01	Caffey			02/08/99	
	6,400,162	06/04/02	Mallory et al.			07/21/00	
	US 2002/0077031	06/20/02	Johansson et al.			07/06/01	
	6,442,496	08/27/02	Pasadyn et al.			08/08/00	
	6,563,308	05/13/03	Nagano et al.			03/27/01	
	6,587,744	07/01/03	Stoddard et al.			06/20/00	
<b>FOREIGN PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
SNB	WO 01/11679	02/15/01	WIPO			X	
SNB	WO 01/080306	10/25/01	WIPO			X	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
SNB	Miller, G. L., D. A. H. Robinson, and J. D. Wiley. July 1976. "Contactless measurement of semiconductor conductivity by radio frequency-free-carrier power absorption." <i>Rev. Sci. Instrum.</i> , Volume 47, No. 7. pp. 799 - 805.						
SNB	1999. "Contactless Bulk Resistivity/Sheet Resistance Measurement and Mapping Systems." <a href="http://www.Lehighton.com/fabtech1/index.html">www.Lehighton.com/fabtech1/index.html</a> .						
SNB	2000. "Microsense II Capacitance Gaging System." <a href="http://www.adetech.com">www.adetech.com</a> .						
EXAMINER <i>Garland</i>				DATE CONSIDERED <i>10/3/05</i>			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b>		ATTY. DOCKET NO. 004066 USA D01/Consilium/Consilium		SERIAL NO. 10/084,092 <b>RECEIVED</b> DEC 19 2003 Technology Center 2100			
		APPLICANT John F. ARACKAPARAMBIL et al.					
		FILING DATE February 28, 2002		GROUP 2121			
<b>FOREIGN PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
Sn L	El Chemali, Chadi et al. July/August 2000. "Multizone uniformity control of a chemical mechanical polishing process utilizing a pre- and postmeasurement strategy." <i>J. Vac. Sci. Technol.</i> Volume 18, No. 4. pp. 1287 - 1296.						
Sn b	March 5, 2001. "KLA-Tencor Introduces First Production-worthy Copper CMP In-situ Film Thickness and End-point Control System." <a href="http://www.kla-tencor.com/j/servlet/NewsItem?newsItemID=74">http://www.kla-tencor.com/j/servlet/NewsItem?newsItemID=74</a> .						
1 n b	2002. "Microsense II - 5810: Non-Contact Capacitance Gaging Module." <a href="http://www.adetech.com">www.adetech.com</a> .						
Sn U	08 August 2003. PCT International Search Report from PCT/US03/08513.						
Sn U	14 October 2003. PCT International Search Report from PCT/US02/21942.						
Sn b	20 October 2003. PCT International Search Report from PCT/US02/19116.						
Sn b	23 October 2003. PCT International Preliminary Examination Report from PCT/US01/24910.						
	<del>"NanoMapper wafer nanotopography measurement by ADE Phase Shift." <a href="http://www.phase-shift.com/nanomap.shtml">http://www.phase-shift.com/nanomap.shtml</a>.</del>						
	<del>"Wafer flatness measurement of advanced wafers." <a href="http://www.phase-shift.com/wafer-flatness.shtml">http://www.phase-shift.com/wafer-flatness.shtml</a>.</del>						
	<del>"ADE Technologies, Inc. - 6360." <a href="http://www.adetech.com/6360.shtml">http://www.adetech.com/6360.shtml</a>.</del>						
	<del>"3D optical profilometer MicroXAM by ADE Phase Shift." <a href="http://www.phase-shift.com/microxam.shtml">http://www.phase-shift.com/microxam.shtml</a>.</del>						
	<del>"NanoMapper FA factory automation wafer nanotopography measurement." <a href="http://www.phase-shift.com/nanomapperfa.shtml">http://www.phase-shift.com/nanomapperfa.shtml</a>.</del>						
EXAMINER <i>Harold</i>			DATE CONSIDERED <i>10/3/05</i>				

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION



(PTO-1449)

ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

RECEIVED

MAR 30 2004

APPLICANT  
John F. ARACKAPARAMBIL et al.

Technology Center 2100

FILING DATE  
February 28, 2002

GROUP  
2121

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	4,901,218	02/13/90	Cornwell			03/04/88
	5,427,878	06/27/95	Corliss			05/16/94
	5,761,065	06/02/98	Kittler et al.			03/30/95
	5,862,054	01/19/99	Li			02/20/97
	5,912,678	06/15/99	Saxena et al.			04/14/97
	5,926,690	07/20/99	Toprac et al.			05/28/97
	6,074,443	06/13/00	Venkatesh et al.			01/29/98
	6,111,634	08/29/00	Pecen et al.			05/28/97
	6,150,664	11/21/00	Su			06/29/99
	6,245,581 B1	06/12/01	Bonser et al.			04/19/00
	2001/0044667 A1	11/22/01	Nakano et al.			05/16/01
	6,346,426 B1	02/12/02	Toprac et al.			11/17/00
	6,363,294 B1	03/26/02	Coronel et al.			12/29/98
	6,442,496 B1	08/27/02	Pasadyn et al.			08/08/00
	6,486,492 B1	11/26/02	Su			11/20/00
	6,492,281 B1	12/10/02	Song et al.			09/22/00
	6,540,591 B1	04/01/03	Pasadyn et al.			04/18/01
	6,560,504 B1	05/06/03	Goodwin et al.			09/29/99
	6,590,179 B2	07/08/03	Tanaka et al.			02/26/01
	6,604,012 B1	08/05/03	Cho et al.			08/23/00
	6,618,692 B2	09/09/03	Takahashi et al.			02/26/01
	6,625,497 B2	09/23/03	Fairbairn et al.			07/10/01
	6,640,151 B1	10/28/03	Somekh et al.			12/22/99


EXAMINER

DATE CONSIDERED

*Harsh*

10/3/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>INFORMATION DISCLOSURE</b> CITATION IN AN APPLICATION <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 20px;">(PTO-1449)</div> </div>				ATTY. DOCKET NO. 004066 USA D01/Consilium/Consilium		SERIAL NO. 10/084,092 <div style="text-align: center; font-weight: bold; font-size: 1.2em;">RECEIVED</div> <div style="text-align: center; font-weight: bold;">MAR 30 2004</div> <div style="text-align: center; font-weight: bold;">Technology Center 2100</div>	
				APPLICANT John F. ARACKAPARAMBIL et al.			
				FILING DATE February 28, 2002		GROUP 2121	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
SAB	0 397 924 A1	11/22/90	Europe			X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
SAB	Rocha, Joao and Carlos Ramos. September 12, 1994. "Task Planning for Flexible and Agile Manufacturing Systems." <i>Intelligent Robots and Systems '94. Advanced Robotic Systems and the Real World, IROS '94. Proceedings of the IEEE/RSJ/GI International Conference on Munich, Germany 12-16 Sept. 1994.</i> New York, New York: IEEE. pp. 105-112.						
SAB	March 15, 2002. Office Action for U.S. Serial No. 09/469,227, filed December 22, 1999.						
SAB	March 29, 2002. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.						
SAB	June 20, 2002. Office Action for U.S. Serial No. 09/619,044, filed July 19, 2000.						
SAB	September 26, 2002. Office Action for U.S. Serial No. 09/637,620, filed August 11, 2000.						
SAB	October 23, 2002. Office Action for U.S. Serial No. 09/469,227, filed December 22, 1999.						
SAB	December 17, 2002. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.						
SAB	February 10, 2003. Office Action for U.S. Serial No. 09/619,044, filed July 19, 2000.						
SAB	April 9, 2003. Office Action for U.S. Serial No. 09/928,474, filed August 14, 2001.						
SAB	May 8, 2003. Office Action for U.S. Serial No. 09/637,620, filed August 11, 2000.						
SAB	June 18, 2003. Office Action for U.S. Serial No. 09/655,542, filed September 6, 2000.						
SAB	August 8, 2003. International Search Report for PCT/US03/08513.						
SAB	August 25, 2003. Office Action for U.S. Serial No. 10/100,184, filed March 19, 2002.						
SAB	September 15, 2003. Office Action for U.S. Serial No. 09/928,474, filed August 14, 2001.						
SAB	November 5, 2003. Office Action for U.S. Serial No. 10/172,977, filed June 18, 2002.						
SAB	December 1, 2003. Office Action for U.S. Serial No. 10/173,108, filed June 18, 2002.						
SAB	December 11, 2003. Office Action for U.S. Serial No. 09/943,383, filed August 31, 2001.						
SAB	December 16, 2003. International Search Report for PCT/US03/23964.						
SAB	January 20, 2004. Office Action for U.S. Serial No. 09/927,444, filed August 13, 2001.						
SAB	January 23, 2004. International Search Report for PCT/US02/24860.						
SAB	February 2, 2004. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.						
EXAMINER				DATE CONSIDERED			
SAB				10/3/05			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	4,957,605	09/18/90	Hurwitt et al.			04/17/89
	5,240,552	08/31/93	Yu et al.			12/11/91
	5,369,544	11/29/94	Mastrangelo			04/05/93
	5,444,837	08/22/95	Bomans et al.			12/29/93
	5,665,214	09/09/97	Iturralde			05/03/95
	5,695,810	12/09/97	Dubin et al.			11/20/96
	5,824,599	10/20/98	Schacham-Diamond et al.			01/16/96
	5,825,356	10/20/98	Habib et al.			03/18/96
	5,831,851	11/03/98	Eastburn et al.			03/21/95
	5,838,951	11/17/98	Song			08/28/96
	5,859,777	01/12/99	Yokoyama et al.			05/13/97
	5,871,805	02/16/99	Lemelson			04/08/96
	5,943,550	08/24/99	Fulford, Jr. et al.			03/29/96
	6,012,048	01/04/00	Gustin et al.			05/30/97
	6,037,664	03/14/00	Zhao et al.			03/31/98
	6,059,636	05/09/00	Inaba et al.			07/09/98
	6,096,649	08/01/00	Jang			10/25/99
	6,100,195	08/08/00	Chan et al.			12/28/98
	6,114,238	09/05/00	Liao			05/20/98
	6,150,270	11/21/00	Matsuda et al.			01/07/99
	6,157,864	12/05/00	Schwenke et al.			05/08/98
	6,181,013 B1	01/30/01	Liu et al.			03/13/00
	6,212,961 B1	04/10/01	Dvir			02/11/99
	6,226,563 B1	05/01/01	Lim			09/04/98
	6,228,280 B1	05/08/01	Li et al.			05/06/98
	6,237,050 B1	05/22/01	Kim et al.			09/04/98
	2001/0006873 A1	07/05/01	Moore			02/13/01
	6,259,160 B1	07/10/01	Lopatin et al.			04/21/99
	6,281,127 B1	08/28/01	Shue			04/15/99

EXAMINER

*Barber*

DATE CONSIDERED

*10/3/05*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	6,317,643 B1	11/13/01	Dmochowski			03/31/99
	6,339,727 B1	01/15/02	Ladd			12/21/98
	6,355,559 B1	03/12/02	Havemann et al.			11/03/00
	6,391,780 B1	05/21/02	Shih et al.			08/23/99
	6,417,014 B1	07/09/02	Lam et al.			10/19/99
	6,427,093 B1	07/30/02	Toprac			10/07/99
	6,432,728 B1	08/13/02	Tai et al.			10/16/00
	6,449,524 B1	09/10/02	Miller et al.			01/04/00
	6,455,415 B1	09/24/02	Lopatin et al.			04/16/01
	2002/0165636 A1	11/07/02	Hasan			04/24/02
	6,484,064 B1	11/19/02	Campbell			10/05/99
	6,495,452 B1	12/17/02	Shih			08/18/99
	2002/0193899 A1	12/19/02	Shanmugasundram et al.			05/01/02
	2003/0017256 A1	01/23/03	Shimane			06/12/02
	6,515,368 B1	02/04/03	Lopatin et al.			12/07/01
	6,517,414 B1	02/11/03	Tobin et al.			03/10/00
	6,528,409 B1	03/04/03	Lopatin et al.			04/29/02
	6,537,912 B1	03/25/03	Agarwal			08/25/00
	6,580,958 B1	06/17/03	Takano			11/22/99
	6,605,549 B2	08/12/03	Leu et al.			09/29/01
	6,607,976 B2	08/19/03	Chen et al.			09/25/01
	6,609,946 B1	08/26/03	Tran			07/14/00
	6,616,513 B1	09/09/03	Osterheld			04/05/01
	6,624,075 B1	09/23/03	Lopatin et al.			11/05/02
	6,630,741 B1	10/07/03	Lopatin et al.			12/07/01
	6,660,633 B1	12/09/03	Lopatin et al.			02/26/02
	6,708,074 B1	03/16/04	Chi et al.			08/11/00
	6,708,075 B2	03/16/04	Sonderman et al.			11/16/01
	6,728,587 B2	04/27/04	Goldman et al.			12/27/00

RECEIVED

AUG 13 2004

Technology Center 2100

EXAMINER

H. Gold

DATE CONSIDERED

10/3/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)

ATTY. DOCKET NO.  
004066 USA  
D01/Consilium/Consilium

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121



## FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
SNL	EP 0 932 195 A1	07/28/99	EP			X	
SNL	EP 1 083 470 A2	03/14/01	EP			X	
SNL	GB 2 365 215 A	02/13/02	GB			X	

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

SNL	Sun, S.C. 1998. "CVD and PVD Transition Metal Nitrides as Diffusion Barriers for Cu Metallization." <i>IEEE</i> . pp. 243-246.
SNL	Tagami, M., A. Furuya, T. Onodera, and Y. Hayashi. 1999. "Layered Ta-nitrides (LTN) Barrier Film by Power Swing Sputtering (PSS) Technique for MOCVD-Cu Damascene Interconnects." <i>IEEE</i> . pp. 635-638.
SNL	Yamagishi, H., Z. Tokei, G.P. Beyer, R. Donaton, H. Bender, T. Nogami, and K. Maex. 2000. "TEM/SEM Investigation and Electrical Evaluation of a Bottomless I-PVD TA(N) Barrier in Dual Damascene" (Abstract). <i>Advanced Metallization Conference 2000</i> . San Diego, CA.
SNL	Eisenbraun, Eric, Oscar van der Straten, Yu Zhu, Katharine Dovidenko, and Alain Kaloyeros. 2001. "Atomic Layer Deposition (ALD) of Tantalum-Based Materials for Zero Thickness Copper Barrier Applications" (Abstract). <i>IEEE</i> . pp. 207-209.
SNL	Smith, S.R., K.E. Elers, T. Jacobs, V. Blaschke, and K. Pfeifer. 2001. "Physical and Electrical Characterization of ALD Tin Used as a Copper Diffusion Barrier in 0.25 mum, Dual Damascene Backend Structures" (Abstract). <i>Advanced Metallization Conference 2001</i> . Montreal, Quebec.
SNL	Kim, Y.T. and H. Sim. 2002. "Characteristics of Pulse Plasma Enhanced Atomic Layer Deposition of Tungsten Nitride Diffusion Barrier for Copper Interconnect" (Abstract). <i>IEIC Technical Report</i> . Vol. 102, No. 178, pp. 115-118.
SNL	Elers, Kai-Erik, Ville Saanila, Pekka J. Soininen, Wei-Min Li, Juhana T. Kostamo, Suvi Haukka, Jyrki Juhanoja, and Wim F.A. Besling. 2002. "Diffusion Barrier Deposition on a Copper Surface by Atomic Layer Deposition" (Abstract). <i>Advanced Materials</i> . Vol. 14, No. 13-14, pp. 149-153.
SNL	Peng, C.H., C.H. Hsieh, C.L. Huang, J.C. Lin, M.H. Tsai, M.W. Lin, C.L. Chang, Winston S. Shue, and M.S. Liang. 2002. "A 90nm Generation Copper Dual Damascene Technology with ALD TaN Barrier." <i>IEEE</i> . pp. 603-606.
SNL	Van der Straten, O., Y. Zhu, E. Eisenbraun, and A. Kaloyeros. 2002. "Thermal and Electrical Barrier Performance Testing of Ultrathin Atomic Layer Deposition Tantalum-Based Materials for Nanoscale Copper Metallization." <i>IEEE</i> . pp. 188-190.
SNL	Wu, Z.C., Y.C. Lu, C.C. Chiang, M.C. Chen, B.T. Chen, G.J. Wang, Y.T. Chen, J.L. Huang, S.M. Jang, and M.S. Liang. 2002. "Advanced Metal Barrier Free Cu Damascene Interconnects with PECVD Silicon Carbide Barriers for 90/65-nm BEOL Technology." <i>IEEE</i> . pp. 595-598.
SNL	July 25, 2003. International Search Report for PCT/US02/24858.
SNL	March 30, 2004. Written Opinion for PCT/US02/19062.
SNL	April 9, 2004. Written Opinion for PCT/US02/19116.
SNL	April 22, 2004. Office Action for U.S. Serial No. 09/998,372, filed November 30, 2000.

RECEIVED

AUG 13 2004

EXAMINER

SNL

DATE CONSIDERED

10/3/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



(PTO-1449)

**SERIAL NO.**  
**10/084,092**

APPLICANT **Technolo**  
John F. ARACKAPARAMBIL et al.

Technology Center 2100

**FILING DATE**  
February 28, 2002

**GROUP  
2121**


## U.S. PATENT DOCUMENTS

[illegible]

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



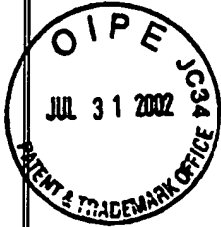
<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>   (PTO-1449)		<b>ATTY. DOCKET NO.</b> 004066 USA D01/Consilium/Consilium	<b>SERIAL NO.</b> 10/084,092
		<b>APPLICANT</b> John F. ARACKAPARAMBIL et al.	
		<b>FILING DATE</b> February 28, 2002	<b>GROUP</b> 2121
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
snv	September 15, 2004. Office Action for U.S. Serial No. 10/632,107, filed August 1, 2003.		
snv	September 29, 2004. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.		
snv	October 1, 2004. International Preliminary Examination Report for PCT Serial No. PCT/US03/23964.		
snv	October 6, 2004. Office Action for U.S. Serial No. 10/759,108, filed January 20, 2004.		
snv	October 12, 2004. International Preliminary Examination Report for PCT Serial No. PCT/US02/19061.		
snv	November 17, 2004. Written Opinion for PCT Serial No. PCT/US01/27407.		
<b>EXAMINER</b> <i>Barcl</i>		<b>DATE CONSIDERED</b> <i>10/3/05</i>	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.





INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
4066 D1/Consilium/DV

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	5,220,517	06/15/93	Sierk et al.			08/31/90
	5,329,463	07/12/94	Sierk et al.			01/13/93
	5,495,417	02/27/96	Fuduka et al.			03/16/93
	5,497,316	03/05/96	Sierk et al.			04/04/95
	5,503,707	04/02/96	Maung et al.			09/22/93
	5,508,947	04/16/96	Sierk et al.			05/13/94
	5,657,254	08/12/97	Sierk et al.			04/15/96

RECEIVED

AUG 6 1 2002

Technology Center 2100

all  
OK'd  
SLC

## FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO./ PUBLICATION NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
SLC	2,050,247	08/29/91	Canada			X	
SLC	2,165,847	08/29/91	Canada			X	
SLC	2,194,855	08/29/91	Canada			X	
SLC	05-151231	06/18/93	Japan				X
SLC	05-216896	08/27/93	Japan				X
SLC	05-266029	10/15/93	Japan				X
SLC	06-110894	04/22/94	Japan				X
SLC	06-176994	06/24/94	Japan				X
SLC	06-252236	09/09/94	Japan				X
SLC	06-260380	09/16/94	Japan				X
SLC	1072967A3	11/21/01	Europe			X	

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

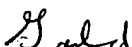
EXAMINER

*Sals*

DATE CONSIDERED

*10/3/05*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b>				ATTY. DOCKET NO. 4066 D1/Consilium/DV		SERIAL NO. 10/084,092	
				APPLICANT John F. ARACKAPARAMBIL et al.			
				FILING DATE February 28, 2002		GROUP 2121	
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
snb	5,694,325	12/02/97	Fukuda et al.			11/22/95	
snb	5,838,595	11/17/98	Sullivan et al.			11/25/96	
<b>FOREIGN PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation Yes No	
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
snb	Zhou, Zhen-Hong and Rafael Reif. August 1995. "Epi-Film Thickness Measurements Using Emission Fourier Transform Infrared Spectroscopy—Part II: Real-Time <i>in Situ</i> Process Monitoring and Control." IEEE Transactions on Semiconductor Manufacturing, Vol. 8, No. 3.						
snb	Telfeyan, Roland, James Moyne, Nauman Chaudhry, James Pugmire, Scott Shellman, Duane Boning, William Moyne, Arnon Hurwitz, and John Taylor. October 1995. "A Multi-Level Approach to the Control of a Chemical-Mechanical Planarization Process." Minneapolis, Minnesota: 42 <sup>nd</sup> National Symposium of the American Vacuum Society.						
snb	Chang, E., B. Stine, T. Maung, R. Divecha, D. Boning, J. Chung, K. Chang, G. Ray, D. Bradbury, O. S. Nakagawa, S. Oh, and D. Bartelink. December 1995. "Using a Statistical Metrology Framework to Identify Systematic and Random Sources of Die- and Wafer-level ILD Thickness Variation in CMP Processes." Washington, D.C.: International Electron Devices Meeting.						
snb	Smith, Taber, Duane Boning, James Moyne, Arnon Hurwitz, and John Curry. June 1996. "Compensating for CMP Pad Wear Using Run by Run Feedback Control." Santa Clara, California: VLSI Multilevel Interconnect Conference.						
snb	Boning, Duane, William Moyne, Taber Smith, James Moyne, Roland Telfeyan, Arnon Hurwitz, Scott Shellman, and John Taylor. October 1996. "Run by Run Control of Chemical-Mechanical Polishing." IEEE Trans. CPMT (C), Vol. 19, No. 4, pp. 307-314.						
<b>RECEIVED</b>							
AUG 01 2002							
EXAMINER				DATE CONSIDERED Technology Center 2100 10/3/05			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
4066 D1/Consilium/DV

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

snb	Edgar, Thomas F., Stephanie W. Butler, Jarrett Campbell, Carlos Pfeiffer, Chris Bode, Sung Bo Hwang, and K.S. Balakrishnan. May 1998. "Automatic Control in Microelectronics Manufacturing: Practices, Challenges, and Possibilities." Automatica, Vol. 36, pp. 1567-1603, 2000.
snb	Chemali, Chadi El, James Moyne, Kareemullah Khan, Rock Nadeau, Paul Smith, John Colt, Jonathan Chapple-Sokol, and Tarun Parikh. November 1998. "Multizone Uniformity Control of a CMP Process Utilizing a Pre and Post-Measurement Strategy." Seattle, Washington: SEMETECH Symposium.
snb	Moyne, James. October 1999. "Advancements in CMP Process Automation and Control." Hawaii: (Invited paper and presentation to) Third International Symposium on Chemical Mechanical Polishing in IC Device Manufacturing: 196 <sup>th</sup> Meeting of the Electrochemical Society.
snb	Lee, Brian, Duane S. Boning, Winthrop Baylies, Noel Poduje, Pat Hester, Yong Xia, John Valley, Chris Koliopoulos, Dale Hetherington, HongJiang Sun, and Michael Lacy. April 2001. "Wafer Nanotopography Effects on CMP: Experimental Validation of Modeling Methods." San Francisco, California: Materials Research Society Spring Meeting.
snb	NovaScan 2020. Printed February 2002. "Superior Integrated Process Control for Emerging CMP High-End Applications."

RECEIVED

AUG 01 2002

EXAMINER

DATE CONSIDERED

*Sauld*

10/3/05 Technology Center 2100

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION



(PTO-1449)

ATTY. DOCKET NO.  
4066 D1/Consilium/DV

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	4,796,194	01/03/89	Atherton			08/20/86
	5,089,970	02/18/92	Lee et al.			10/05/89
	5,108,570	04/28/92	Wang			03/30/90
	5,236,868	08/17/93	Nulman			04/20/90
	5,260,868	11/09/93	Gupta et al.			10/15/91
	5,295,242	03/15/94	Mashruwala et al.			11/02/90
	5,309,221	05/03/94	Fischer et al.			12/31/91
	5,367,624	11/22/94	Cooper			06/11/93
	5,398,336	03/14/95	Tantry et al.			06/16/93
	5,402,367	03/28/95	Sullivan et al.			07/19/93
	5,408,405	04/18/95	Mozumder et al.			09/20/93
	5,410,473	04/25/95	Kaneko et al.			12/16/92
	5,490,097	02/06/96	Swenson et al.			08/06/93
	5,629,216	05/13/97	Wijaranakula et al.			02/27/96

RECEIVED

AUG 01 2002

Technology Center 2100

## FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
Snb	01-283934	11/15/89	Japan			X	
Snb	08-149583	11/15/89	Japan			X	
Snb	09-34535	02/07/97	Japan			X	
Snb	0877308 A2	11/11/98	Europe			X	
Snb	11-67853	03/09/99	Japan			X	

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

Snb	Dishon, G., D. Eylon, M. Finarov, and A. Shulman. "Dielectric CMP Advanced Process Control Based on Integrated Monitoring." Ltd. Rehoveth, Israel: Nova Measuring Instruments.
Snb	Runyan, W. R., and K. E. Bean. 1990. "Semiconductor Integrated Circuit Processing Technology." pg. 48. Reading, Massachusetts: Addison-Wesley Publishing Company.

EXAMINER

DATE CONSIDERED

Haid

10/3/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION



(PTO-1449)

ATTY. DOCKET NO.  
4066 D1/Consilium/DV

SERIAL NO.  
10/084,092

RECEIVED

AUG 01 2002

Technology Center 2100

APPLICANT

John F. ARACKAPARAMBIL et al.

FILING DATE

February 28, 2002

GROUP

2121

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	5,661,669	08/26/97	Mozumder et al.			06/07/95
	5,698,989	12/16/97	Nulman			09/13/96
	5,719,495	02/17/98	Moslehi			06/05/96
	5,740,429	04/14/98	Wang et al.			07/07/95
	5,751,582	05/12/98	Saxena et al.			09/24/96
	5,754,297	05/19/98	Nulman			04/14/97
	5,764,543	06/09/98	Kennedy			06/16/95

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

520	Zorich, Robert. 1991. <i>Handbook of Quality Integrated Circuit Manufacturing</i> . pp. 464-498 San Diego, California: Academic Press, Inc.
520	Rampalli, Prasad, Arakere Ramesh, and Nimish Shah. 1991. <i>CEPT—A Computer-Aided Manufacturing Application for Managing Equipment Reliability and Availability in the Semiconductor Industry</i> . New York, New York: IEEE.
520	Moyne, James R., Nauman Chaudhry, and Roland Telfeyan. 1995. "Adaptive Extensions to a Multi-Branch Run-to-Run Controller for Plasma Etching." <i>Journal of Vacuum Science and Technology</i> . Ann Arbor, Michigan: University of Michigan Display Technology Manufacturing Center.
520	Moyne, James, Roland Telfeyan, Arnon Hurwitz, and John Taylor. August 1995. "A Process-Independent Run-to-Run Controller and Its Application to Chemical-Mechanical Planarization." <i>SEMI/IEEE Advanced Semiconductor Manufacturing Conference and Workshop</i> . Ann Arbor, Michigan: The University of Michigan, Electrical Engineering & Computer Science Center for Display Technology & Manufacturing.
520	Dishon, G., M. Finarov, R. Kipper, J.W. Curry, T. Schraub, D. Trojan, 4 <sup>th</sup> Stambaugh, Y. Li and J. Ben-Jacob. February 1996. "On-Line Integrated Metrology for CMP Processing." Santa Clara, California: VMIC Speciality Conferences, 1 <sup>st</sup> International CMP Planarization Conference.
520	SEMI. [1986] 1996. "Standard for Definition and Measurement of Equipment Reliability, Availability, and Maintainability (RAM)." SEMI E10-96.

EXAMINER

DATE CONSIDERED

*Hald*

10/3/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE  
CITATION IN AN  
APPLICATION  
(PTO-1449)



ATTY. DOCKET NO.  
4066 D1/Consilium/DV

SERIAL NO.  
10/084,092

APPLICANT  
John F. ARACKAPARAMBIL et al.

FILING DATE  
February 28, 2002

GROUP  
2121

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	5,808,303	09/15/98	Schlagheck et al.			01/29/97
	5,883,437	03/16/99	Maruyama et al.			12/28/95
	5,910,011	06/08/99	Cruse			05/12/97
	6,054,379	04/25/00	Yau et al.			02/11/98

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

526	Van Zant, Peter. 1997. <i>Microchip Fabrication: A Practical Guide to Semiconductor Processing</i> . Third Edition, pp. 472-478. New York, New York: McGraw-Hill.
526	Campbell, W. Jarrett, and Anthony J. Toprac. February 11-12, 1998. "Run-to-Run Control in Microelectronics Manufacturing." Advanced Micro Devices, TWMCC.
520	Moyne, James, and John Curry. June 1998. "A Fully Automated Chemical-Mechanical Planarization Process." Santa Clara, California: VLSI Multilevel Interconnection (V-MIC) Conference.
526	SEMI. July 1998. <i>New Standard: Provisional Specification for CIM Framework Domain Architecture</i> . Mountain View, California: SEMI Standards. SEMI Draft Doc. 2817.
526	Consilium. August 1998. <i>Quality Management Component: QMC™ and QMC-Link™ Overview</i> . Mountain View, California: Consilium, Inc.
526	Consilium. 1998. <i>FAB300™</i> . Mountain View, California: Consilium, Inc.
526	Khan, Kareemullah, Victor Solakhain, Anthony Ricci, Tier Gu, and James Moyne. 1998. "Run-to-Run Control of ITO Deposition Process." Ann Arbor, Michigan.
526	Consilium. January 1999. "FAB300™: Consilium's Next Generation MES Solution of Software and Services which Control and Automate Real-Time FAB Operations." <a href="http://www.consilium.com/products/fab300_page.htm#FAB300%20Introduction">www.consilium.com/products/fab300_page.htm#FAB300 Introduction</a>
526	Consilium. July 1999. "Increasing Overall Equipment Effectiveness (OEE) in Fab Manufacturing by Implementing Consilium's Next-Generation Manufacturing Execution System - MES II." Semiconductor Fabtech Edition 10.
526	Consilium Corporate Brochure. October 1999. <a href="http://www.consilium.com">www.consilium.com</a>
526	Consilium. November 1999. <i>FAB300™ Update</i> .
526	SEMI. 2000. "Provisional Specification for CIM Framework Scheduling Component." San Jose, California. SEMI E105-1000.

EXAMINER

DATE CONSIDERED

RECEIVED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

Technology Center 2100